

# Policy & Procedure (P& P)

# Policy Title:

# **Anti-A1 Typing**

| Department              | Index No.            | Scope  All Laboratory staff  Effective Date |  |
|-------------------------|----------------------|---|--|
| Laboratory & Blood Bank | LAB-063              |   |  |
| Issue Date              | Revision NO          |   |  |
| 1437/06/12              | 3                    | 1440/07/23                                  |  |
| Review Due Date         | Related Standard NO. | Page Number#                                |  |
| 1442/07/23              | CBAHI ( LB. 50 )     | 3   |  |

# 01. Policy:

01.1. The blood bank confirms all specimens suspected to be A2 or A2B blood sub-groups using the anti-A1 lectin.

## 02. Definition:

02.1. N/A

## 03. Purpose:

03.1. All specimens where A2 or A2B blood group is suspected is confirmed with anti-A1 lectin.

## 04. Procedure:

### 04.1. Specimen Requirements

Blood collected with anticoagulant is used.

Specimens collected in CPD, CPDA-1, sodium citrate, oxalate, EDTA, or heparin are all acceptable.

Testing should be performed as soon as possible.

If a delay in testing occurs, specimens should be stored at 2-8 degrees centigrade and tested within 48 hours.

No patient preparation is required.

### 04.2. Materials

- 04.2.1. Glass test tubes
- 04.2.2. Blood Bank pipettes
- 04.2.3. Isotonic saline 0.85% NaCl

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- 04.2.4. Calibrated serologic centrifuge
- 04.2.5. Microscope and slides

## 04.3. Reagents

04.3.1. Anti-A1 Lectin

#### 04.4. Method

- 04.4.1. Wash an appropriate volume of patient red blood cells two times with isotonic saline.
- 04.4.2. Prepare a 3% to 5% suspension of red blood cells in isotonic saline.
- 04.4.3. To a labeled test tube add one drop of anti-A1 lectin.
- 04.4.4. Using a plastic pipette add one drop of the patient's cell suspension
- 04.4.5. Mix well and centrifuge according to the optimum saline spin time listed for the centrifuge.
- 04.4.6. Resuspend the cells by gentle agitation and examine macroscopically and microscopically.
- 04.4.7. Record results on worksheet.

#### 04.5. Quality Control

Reagents are to be tested with appropriate positive and negative controls daily and the results recorded. See "Daily Quality Control" for procedure.

### 04.6. Reporting Results:

#### 04.6.1. Interpretation

Agglutination of the red cells is a positive test result and indicates the presence of A1 antigen.

No agglutination is a negative test result and indicates the absence of the A1 antigen and the blood group is A2 or A2B.

Reactions should show the following pattern with group A red blood cells.

| Anti-A1 Lectin | Interpretation |  |
|----------------|----------------|--|
| +              | A1             |  |
|                | A2             |  |

#### 04.7. Limitations:

04.7.1. Testing must always be performed at room temperature (200 to 300 C) and never incubated at higher



temperatures.

- 04.7.2. The A1 antigen is not fully expressed on the red blood cells of newborn infants and false negative results may occur
- 04.7.3. Leukemia may produce a weekend form of A.

# 05. Responsibilities:

05.1. All laboratory of Al-Qunfudah General Hospital.

# 06. Equipment & Forms

06.1. Blood Grouping Book

## 07. Attachment:

07.1. N/A

# 08. Reference

08.1. The Technical manual of the American Association of Blood Banks.

# Preparation, Reviewing & Approval Box

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